

MACKINNON RAVINE PEDESTRIAN BRIDGE (B165) REPLACEMENT PROJECT

Environmental Impact Assessment

RECOMMENDATION

That Executive Committee recommend to City Council:

That the Environmental Impact Assessment for the MacKinnon Ravine Pedestrian Bridge Replacement project, as outlined in Attachment 1 of the March 1, 2023, Integrated Infrastructure Services report IIS01470, be approved.

Requested Council Action		Decision required	
ConnectEdmonton's Guiding Principle		ConnectEdmonton Strategic Goals	
CONNECTED This unifies our work to achieve our strategic goals.		N/A	
City Plan Values	N/A		
City Plan Big City Move(s)	N/A	Relationship to Council's Strategic Priorities	Conditions for service success
Corporate Business Plan	Managing the corporation		
Council Policy, Program or Project Relationships	<ul style="list-style-type: none">North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188)		
Related Council Discussions	<ul style="list-style-type: none">N/A		

MACKINNON RAVINE PEDESTRIAN BRIDGE (B165) REPLACEMENT PROJECT - Environmental Impact Assessment

Executive Summary

- This report requests City Council's approval of the Environmental Impact Assessment included in Attachment 1 for the MacKinnon Ravine Pedestrian Bridge (B165) Replacement project, within the River Valley.
- The previous bridge, located east of the intersection of 149 Street and Stony Plain Road, was removed in February 2022 due to safety concerns. A replacement bridge is planned on the same alignment to accommodate pedestrians and cyclists. Construction is planned to begin in summer 2023.
- The Environmental Impact Assessment describes that the project has potential environmental impacts on surface water, soils, vegetation, wildlife and historic resources. The Environmental Impact Assessment concludes that negative impacts from the project are anticipated to be limited and not significant, given the implementation of mitigation measures through design and construction.
- Approval of this report demonstrates the City's commitment to environmental reviews, environmental permitting, environmentally sound design, and ensuring the City's environmental stewardship objectives are met during the construction of this project.

REPORT

The MacKinnon Ravine Pedestrian Bridge (B165) Replacement project is planned to include a new pedestrian/cyclist bridge structure to replace the previous bridge, demolished in February 2022. The previous bridge was removed due to safety concerns and challenges associated with repairing aging wooden structures. The bridge is located east of the intersection of 149 Street and Stony Plain Road, providing access across the MacKinnon Ravine from Summit Drive NW to Stony Plain Road. In alignment with City plans and policies, stakeholder feedback and the importance of the crossing in the City's active transportation network, the project objectives are to replace the previous bridge in a timely manner with a functional structure that meets current design standards and accommodates all users safely and efficiently.

The replacement bridge is a 4.2 metre wide, three-span timber structure supported on steel piers, following the same alignment as the previous bridge. The new structure will accommodate two-way travel for active transportation users. The scope includes lighting at both ends of the bridge, minor tree pruning and removals, minor vegetation removal, and minor hardscape and landscape restoration work.

As shown in Figure 1 in Attachment 1, the replacement project and construction access fall within the boundaries of the City's North Saskatchewan River Valley Area Redevelopment Plan, Bylaw 7188. As a result, an Environmental Impact Assessment is required. The new bridge will occupy a similar footprint and alignment as the previous bridge it is replacing. As a result, it was determined that a Site Location Study is not required.

The enclosed Environmental Impact Assessment (Attachment 1) outlines current environmental conditions in the project area and identifies adverse environmental impacts and how they can be eliminated, minimized, or mitigated through design or construction measures.

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The Environmental Impact Assessment describes the land within the project area as ranging from low to extremely high environmental sensitivity. The land of moderate to extremely high sensitivity is generally located within the MacKinnon Ravine and comprises mixed wood forest and non-maintained grasses and shrubs. The land of low to moderate sensitivity is located at the interface between the ravine and the surrounding urban area, generally comprising maintained grasses and shrubs. The project area was disturbed during the demolition of the previous bridge. No trees were removed and any disturbed land was restored to natural vegetation.

The area does not include a waterbody or critical fish habitat. However, the area does direct surface runoff to the North Saskatchewan River. Overall wildlife habitat quality is expected to be marginal, though it is part of the River Valley which is considered to be a high-quality habitat. The project area includes a habitat suitable for several bird species listed as sensitive, potentially at risk, and was observed to contain typical urban wildlife species.

The most notable impacts and mitigations identified in the Environmental Impact Assessment include:

Surface water

- Potential impacts include short-term changes to local drainage patterns and to surface water quality due to construction activities.
- Mitigation measures include developing and implementing an Environmental Construction Operation (ECO) plan including an erosion and sediment control plan, following the City of Edmonton's contractors' environmental responsibilities, as well as following best management practices. Mitigation measures include minimizing disturbance and vegetation clearing and restoring all disturbed areas following construction. No residual impacts are anticipated.

Soils

- Potential impacts include a reduction in soil quality and quantity from construction activities including soil stripping, stockpiling and use of heavy equipment.
- Mitigation measures include developing and implementing an Environmental Construction Operation (ECO) plan including an erosion and sediment control plan, following the City of Edmonton's contractors' environmental responsibilities, following regulatory requirements, and following best management practices. Mitigation measures also include minimizing the footprint of the project and vegetation clearing, salvaging and reusing topsoil if suitable, and restoring all disturbed areas following construction. Some residual impacts may occur, however, they are anticipated to be insignificant.

Vegetation

- Potential impacts include loss of vegetation and introduction of weed species. While the bridge alignment was mostly cleared and disturbed during the construction and demolition of the previous bridge, some tree pruning, tree removals and vegetation removals will be required along the bridge alignment and access route in the River Valley.

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- Mitigation measures include developing and implementing an ECO plan, following the City of Edmonton's contractors' environmental responsibilities, following regulatory requirements including obtaining a Public Tree Permit, as well as following best management practices. Mitigation measures also include limiting vegetation clearing and tree pruning only to that required for the project, cleaning equipment, controlling weeds if encountered and restoring disturbed areas. Residual loss of vegetation is anticipated near the bridge abutments (where there will be limited natural light) and below the bridge piers, though the loss is considered to be minor.

Wildlife

- Potential impacts include loss of habitat due to tree pruning and vegetation clearing, sensory disturbance during construction and once the bridge is operational, restriction of wildlife movements during construction, and the mortality of wildlife during clearing and excavation.
- Mitigation measures include developing and implementing an ECO plan, following regulatory requirements including scheduling vegetation removals outside of the migratory bird nesting period if possible, as well as following best management practices. Mitigation measures also include implementing a setback if an active nest or animal den is found, avoiding feeding animals and storing waste properly. Residual impacts are expected to include a minor loss of habitat and some sensory disturbance to animals. These impacts are not considered to be significant.

Historic Resources

- Potential impacts include disturbing unanticipated archaeological or palaeontological features.
- Approval has been issued by Alberta Culture and the Status of Women for the project. There is a low likelihood of disturbances to historic resources.

The anticipated residual impacts to soils and loss of wildlife habitat are anticipated to act cumulatively with the impacts from the original bridge construction. The spread of weeds is anticipated to act cumulatively with the previous bridge and with surrounding projects. Cumulative impacts are anticipated to be minimal.

Budget/Financial Implications

The MacKinnon Ravine Pedestrian Bridge project is funded through the City's Bridge Renewal Program (CM-24-0000). Planning and design was funded through the 2019-2022 budget, while delivery is funded through the 2023-2026 budget.

Legal Implications

Section 3.4.3 of the North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188) requires City Council to approve the attached Environmental Impact Assessment (Attachment 1) for the project before the proposed bridge replacement can proceed to construction.

COMMUNITY INSIGHT

As part of the preliminary design phase, the project team engaged with key stakeholders which included the Grovenor and Crestwood community leagues, and Summit Village Housing Cooperative. Through engagement, the project team gathered feedback on bridge design considerations and on the recommended bridge design. The stakeholders did not share any significant concerns from an environmental perspective. The stakeholders were generally supportive of the project objectives, and recommended bridge design and construction plans, including anticipated tree pruning, vegetation removals and access through the River Valley.

Project information, including anticipated environmental impacts, was also shared with environmental and user groups including Paths for People, Edmonton River Valley Conservation Coalition, River Valley Alliance, Sierra Club and Bike Edmonton. The groups were offered the opportunity for a meeting to learn more about the project and shared additional feedback. Responses were received from Path for People, Edmonton River Valley Conservation Coalition and Sierra Club. These stakeholders did not express any environmental concerns.

Input shared by key stakeholders will continue to be considered when completing the detailed design. Additionally, the project team is committed to ensuring communications and information sharing continue in advance of, and during construction. A project web page has been set up and additional site signage is planned to share information about the project, timelines and construction activities.

GBA+

The stakeholder engagement planning process for the MacKinnon Ravine Pedestrian Bridge (B165) project included GBA+ considerations to mitigate or remove barriers to equity and to support equality of outcomes during the engagement process. This allowed the project team to gather feedback from different perspectives to identify additional design considerations to mitigate or remove barriers to equity and support equality of outcomes such as ensuring adequate lighting on the bridge to provide users with an added sense of security.

The recommended replacement structure is planned to meet modern design standards and to provide safe, accessible and comfortable accommodation for users of all ages and abilities.

ATTACHMENT

1. Environmental Impact Assessment - MacKinnon Ravine Pedestrian Bridge (B165) Replacement